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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,359	03/18/2002	David Coates	MERCH 2392	9088

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EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,359

Applicant(s)

COATES ET AL.

Examiner

Michael H. Caley

Art Unit

2871

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

Applicant is advised that should claim 1 be found allowable, claim 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Although the preamble wording has been modified to pertain to a single display instead of multiple displays and the punctuation has been altered, it is the Office's view that the two claims are substantial duplicates.

Allowable Subject Matter

The indicated allowability of claims 1-12 is withdrawn in view of the newly discovered reference(s) to Kobori et al. (U.S. Patent No. 5,855,971 "Kobori"). Rejections based on the newly cited reference(s) follow.

Examiner Notes

The Examiner maintains that for examination purposes, the definitions for the terms O-plate and A-plate supplied by Applicant spanning page 1 line 34 to page 2 line 6 are considered to limit the recitations of these terms in the claims as is proper and well established. The Examiner also notes that these definitions are considered to be consistent with the meanings of the terms within the art (MPEP 2111.01).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobori et al. (U.S. Patent No. 5,855,971 "Kobori") in view of Koch et al. (U.S. Patent No. 5,619,352 "Koch").

Regarding claims 1, 16, 21, and 22, Kobori discloses an optical compensator having:

at least one twisted A plate retarder with a twist angle of more than 90 degrees

(Figure 4; Column 9 lines 14-18; Example I).

Kobori fails to explicitly disclose the optical compensator as additionally having at least one O-plate retarder. Kobori discloses the compensators of his invention as "remedying the conventional contrast and color tone problem based on visual angle" (Column 115 lines 10-13).

Art Unit: 2871

Kobori, however, recognizes the practical use of using additional conventional compensating films in conjunction with the disclosed compensating film in the construction of such a compensator (Column 114 lines 62-67, Column 115 lines 1-3). While Kobori addresses the problem of contrast, Koch teaches a need for improving grayscale stability by the addition of an O-plate compensator (Column 5 line 65 to Column 6 line 11). Koch teaches the combination of O-plates with A-plates and/or C-plates in order to remedy both contrast and grayscale stability over the field of view of the display (Column 7 line 8 to Column 9 line 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compensator as disclosed by Kobori by adding an O-plate compensator to improve the grayscale stability over the entire region of the display. Kobori suggests a need for and compatibility with additional compensators to achieve other desired visual effects of the display. One would have been motivated to construct the compensator disclosed by Kobori with an O-plate compensator in order to improve the grayscale stability for a larger viewing angle range of the display.

Regarding claim 2, Koch discloses a typical O-plate such as used in the various example compensators as having an average tilt angle in the O-plate retarder from 2 to 88 degrees (Column 7 lines 8-23).

Regarding claims 3 and 20, Kobori discloses the twist angle of the twisted A plate retarder as at least 360 degrees (Column 7 line 58 to Column 9 line 13).

Art Unit: 2871

Regarding claims 4 and 17, Koch discloses the O-plate retarder such as used in the various example compensators as varying monotonously as proposed (Column 7 lines 8-22).

Regarding claims 5, 6, 18, and 19, Koch discloses the O-plate retarder such as used in the various example compensators as having the proposed maximum and minimum tilt angles (Column 7 lines 8-22).

Regarding claim 7, Kobori discloses the proposed thickness of the twisted A-plate (Column 112 lines 9-16).

Regarding claim 8, Kobori discloses various embodiments having the proposed retardation of the twisted A-plate (Column 123 lines 1-9). Additionally, it is well known for conventional O-plates to have the proposed retardation.

Regarding claim 9, Koch discloses the use of an O plate having the proposed structure (Column 10 lines 51-59).

Regarding claim 10, Kobori discloses the twisted A plate as having the proposed structure (Column 11 lines 31-59).

Regarding claim 11, Kobori discloses the twisted A plate as having a helical pitch of the chiral liquid crystalline material of less than 250 nm (Column 116 lines 13-20).

Art Unit: 2871

Regarding claim 12, Kobori discloses the use of the optical compensator within a liquid crystal display having the proposed structure (Figure 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (703) 305-7913. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



mhc
July 25, 2003



ROBERT H. KIM
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